Fisheries Review

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AQUATIC PLANTS AND THEIR CONTROL

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[SEAFDEC/AQD, P O. Box 256, Iloilo City, Philippines] *Chanos chanos*.

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[SEAFDEC Aquacult. Dep., Binangonan, Rizal 1903, Philippines] *T nilotica* and *T. mossambica*

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[Inst Cienc Mar , Passeig Nac. s/n, E-08003 Barcelona, Spain] Data for 45 species.

90-003922 Ubal, Walter, Walter Norbis; Beatriz Bosch; Martin Parietti and Diego Pagano [MIGRATION OF THE HAKE (*MERLUCCIUS HUBBSI*) CONSIDERING THE RANKS OF LENGTH IN THE ARGENTINE-URUGUAYAN COMMON FISHING ZONE.] *Publ. Com. Tecnica Mixte Frinte Marit.* 3 15-23. 1987. In Spanish with English summ FR 35(3)
[Inst Nac Pesca, Constituyente 1497, Montevideo, Uruguay]

90-003923 Ueno, Yasuhiro, Ikutaro Shimizu and Alexey P. Shershnev. SURFACE WATER TYPE AND DISTRIBUTION OF JUVENILE FISHES AND CEPHALOPODS IN PACIFIC COAST WATERS OF HOKKAIDO AND THE KURIL ISLANDS IN SUMMER, 1989 *Bull. Far Seas Fish. Res. Lab. (Shimizu)* 27.57-70 1990 In English with Japanese summ FR 35(3)
[Natl Res Inst Far Seas Fish., 7-1 Orido 5 Chome, Shimizushi, Shizuoka 424, Japan] *Oncorhynchus keta, Sardinops melanosticta, Engraulis japonica* and *Cololabis saira* with data for 24 other species.

90-003924 Vasilenko, A. V and T. G Sokolovskaya. ON MASS PENETRATIONS OF THE JAPANESE HORSEMACKEREL, *TRACHURUS JAPONICUS*, AND THE BLACK FILEFISH, *NAVODON MODESTUS*, INTO THE OPEN WATERS OF THE NORTHWESTERN PACIFIC OCEAN *J. Ichthyol. (Engl. Transl. Vopr. Ikhtiol.)* 29(5):99-102 1989. FR 35(3)
[Pac Ocean Sci. Res. Inst Fish & Oceanogr (TINRO), Vladivostok, USSR]

90-003925 Witherell, David B and Boyd Kynard. VERTICAL DISTRIBUTION OF ADULT AMERICAN SHAD IN THE CONNECTICUT RIVER *Trans. Am. Fish. Soc.* 119(1):151-155. 1990 FR 35(3)
[Div Mar. Fish., 18 Rt. 6A, Sandwich, MA 02563] *Alosa sapidissima.*

FOODS/FEEDING

90-003926 Balon, Eugene K. TRACKING THE COELACANTH: A FOLLOW-UP TALE *Trop. Fish Hobbyist* 38(7):122-131. 1990. FR 35(3)
[Dep Zool , Univ Guelph, Guelph, ON, Canada N1G 2W1]

90-003927 Carrasson, M. and J. Matallanas PRELIMINARY DATA ABOUT THE FEEDING HABITS OF SOME DEEP-SEA MEDITERRANEAN FISHES. *J. Fish Biol.* 36(3):461-463. 1990. FR 35(3)
[Lab. Zool., Autonomous Univ Barcelona, Bellaterra, Barcelona, Spain] *Alepocephalus rostratus, Bathypterois mediterraneus, Lepidion lepidion,* and *Cataetyx alleni.*

90-003928 Carrasson, M. and J Matallanas. [DIET AND FECUNDITY OF *N. AEQUALIS* (PISCES, MACROURIDAE) IN THE CATALAN SEA] *Vie Milieu* 39(3/4):173-181. 1989. In French with English summ. FR 35(3)
[Dep. Zool., Univ. Autonoma Barcelona, Bellaterra, Barcelona, Spain] *Nezumia aequalis.*

90-003929 Chifamba, P C. PREFERENCE OF *TILAPIA RENDALLI* (BOULENGER) FOR SOME SPECIES OF AQUATIC PLANTS. *J. Fish Biol.* 36(5):701-705. 1990. FR 35(3)
[Lake Kariba Fish Res. Inst , Box 75, Kariba, Zimbabwe]

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90-003930 Confer, John L , Edward L. Mills and Linda O'Bryan INFLUENCE OF PREY ABUNDANCE ON SPECIES AND SIZE SELECTION BY YOUNG YELLOW PERCH (*PERCA FLAVESCENS*) *Can. J. Fish. Aquat. Sci.* 47(5) 882-887 1990 In English with French summ FR 35(3)
[Biol. Dep , Ithaca Coll., Ithaca, NY 14850]

90-003931 Costello, Mark J., Joan Edwards and Geoffrey W Potts THE DIET OF THE TWO-SPOT GOBY, *GOBIUSCULUS FLAVESCENS* (PISCES). *J. Mar. Biol. Assoc. U.K.* 70(2).329-342. 1990 FR 35(3)
[Environ. Sci. Unit, Trinity Coll , Dublin 2, Ireland]

90-003932 D'Avanzo, Charlene and Ivan Valiela. USE OF DETRITAL FOODS AND ASSIMILATION OF NITROGEN BY COASTAL DETRITIVORES *Estuaries* 13(1) 20-24. 1990 FR 35(3)
[Hampshire Coll., Amherst, MA 01002] *Cyprinodon variegatus* and *Fundulus heteroclitus* in Massachusetts.

90-003933 Deegan, Linda A., Bruce J Peterson and Ralph Portier STABLE ISOTOPES AND CELLULASE ACTIVITY AS EVIDENCE FOR DETRITUS AS A FOOD SOURCE FOR JUVENILE GULF MENHADEN. *Estuaries* 13(1)·14-19 1990 FR 35(3)
[Ecosyst. Cent , Mar. Biol Lab., Woods Hole, MA 02543] *Brevoortia patronus* and *B. tyrannus*.

90-003934 Oemetropoulos, C L.; L. F. Braithwaite; B. A. Maurer and D. Whiting. FORAGING AND DIETARY STRATEGIES OF TWO SUBLITTORAL COTTIDS, *JORDANIA ZONOPE* AND *ARTEDIUS HARRINGTONI*. *J. Fish Biol.* 37(1)·19-32. 1990. FR 35(3)
[14025 Peach Grove St., Sherman Oaks, CA 91423]

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[All-Union Sci. Res. Inst. Mar. Fish. & Oceanogr., VNIRO, Moscow, USSR]

90-003936 Gerasimov, Yu. V. and V. D. Limik. EFFECTS OF THE PRESENCE OF AMBUSH PREDATORS ON THE FEEDING BEHAVIOR OF NONPREDATORY FISHES *J. Ichthyol. (Engl. Transl. Vopr. Ikhtiol.)* 29(5):110-115 1989 FR 35(3)
[Inst. Biol Inland Waters SSR-IBVV, Borok, Yaroslavskoy Region, USSR] *Esox lucius* and *Hypophthalmichthys molitrix*

90-003937 Goberna, Eduardo. [STOMACHAL CONTENTS IN JUVENILES OF FISHES A COMPARATIVE ANALYSIS.] *Publ. Com. Tecnica Mixte Frinte Marit.* 3:93-101. 1987. In Spanish with English summ FR 35(3)
[Inst Nac. Pesca, Constituyente 1497, Montevideo, Uruguay] Data for 10 species in Uruguay.

90-003938 Gordoa, Ana and Enrique Macpherson FOOD SELECTION BY A SIT-AND-WAIT PREDATOR, THE MONKFISH, *LOPHIUS UPSICEPHALUS*, OFF NAMIBIA (SOUTH WEST AFRICA). *Environ. Biol. Fishes* 27(1):71-76. 1990. FR 35(3)
[Inst. Cienc. Mar, Paseo Natl s/n, 08003 Barcelona, Spain] *Merluccius capensis, Nematogobius biborbatus, Paracallionymus costatus*, and *Coelorinchus fasciatus*

FOODS/FEEDING (CONTINUED)

90-003939 Gorelova, T. A and V. N. Efremenko. ON THE FOOD COMPOSITION OF THE LARVAE OF TWO SPECIES OF LANTERN ANCHOVIES (MYCTOPHIDAE) FROM THE SCOTIA SEA *J. Ichthyol. (Engl. Transl. Vopr. Ikhtiol.)* 29(5) 106-109 1989. FR 35(3)
[Inst. Oceanol. AN SSSR--IOAN, Moscow, USSR] *Krefftichthys anderssoni* and *Electrona antarctica* in Antarctica

90-003940 Gotceitas, Vytenis. VARIATION IN PLANT STEM DENSITY AND ITS EFFECTS ON FORAGING SUCCESS OF JUVENILE BLUEGILL SUNFISH *Environ. Biol. Fishes* 27(1):63-70. 1990 FR 35(3)
[Dep. Biol., Mt. Allison Univ., Sackville, NB, Canada E0A 3C0] *Lepomis macrochirus* in Canada.

90-003941 Haight, Wayne R. TROPHIC RELATIONSHIPS OF DEEPWATER SNAPPERS (LUTJANIDAE) FROM PENGUIN BANK, HAWAII *Pac. Sci* 44(2) 185-186. 1990. Abstract only. FR 35(3)
[Dep. Zool., Univ Hawaii Manoa, Honolulu 96822] *Pristipomoides filamentosus, P. sieboldii, Tropidinius zonatus, Etelis carbunculus, E. coruscans,* and *Aprion virescens.*

90-003942 Halloy, Monique and Gordon M. Burghardt ONTOGENY OF FISH CAPTURE AND INGESTION IN FOUR SPECIES OF GARTER SNAKES (*THAMNOPHIS*). *Behaviour* 112(3-4):299-318. 1990. In English with French summ. FR 35(3)
[Burghardt: Dep Psychol. & Zool., Univ Tenn., Knoxville 37996] *Gambusia affinis, Pimephales promelas, Carassius auratus,* and *Notemigonus crysoleucas.*

90-003943 Hirota, Yuichi; Yuichi Koshiishi and Noriko Naganuma. [SIZE OF MYSIDS EATEN BY JUVENILE FLOUNDER *PARALICHTHYS OLIVACEUS* AND DIURNAL CHANGE OF ITS FEEDING ACTIVITY] *Nippon Suisan Gakkaishi* 56(2) 201-206 1990. In Japanese with English summ. FR 35(3)
[Japan Sea Natl Fish Res. Inst , Suido, Niigata 951, Japan]

90-003944 Huh, Sung Hoi. [STUDIES ON THE FISHERY BIOLOGY OF POMFRETS, *PAMPUS* SPP., IN THE KOREAN WATERS. 4. FOOD OF *PAMPUS ECHINOGASTER*] *Bull. Korean Fish. Soc.* 22(5):291-293. 1989. In Korean with English summ. FR 35(3)
[Dep. Oceanogr , Natl. Fish. Univ Pusan, Pusan 608-737, Korea] *P. argenteus.*

90-003945 Jamet, Jean Louis; Pierre Gres, Nicole Lair and Gerard Lasserre. DIEL FEEDING CYCLE OF ROACH (*RUTILUS RUTILUS*, L.) IN EUTROPHIC LAKE AYDAT (MASSIF CENTRAL, FRANCE). *Arch. Hydrobiol.* 118(3):371-382 1990. FR 35(3)
[Univ. Blaise Pascal, Hydrobiol. Eaux Douces, 63177 Aubiere Cedex, France]

90-003946 Johnsen, B. O. and O. Ugedal FEEDING BY HATCHERY- AND POND-REARED BROWN TROUT, *SALMO TRUTTA* L., FINGERLINGS RELEASED IN A LAKE AND IN A SMALL STREAM. *Aquocult. Fish. Manage.* 21(2):253-258. 1990. FR 35(3)
[Inst. Nat. Res., Tungasletta 2, N-7004 Trondheim, Norway]

90-003947 Jones, Ray N. and O Eugene Maughan. FOOD HABITS OF THE JUVENILE AND ADULT ORANGEBELLY DARTER, *ETHEOSTOMA RAOIOSUM*, IN GLOVER CREEK, OKLAHOMA. *Proc. Okla. Acad. Sci.* 69:39-43. 1989. FR 35(3)
[Kenai Fish. Assist Office, U.S. Fish & Wildl. Serv., P.O. Box 5089, Kenai, AK 99611]

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90-003948 Jorgensen, E. H and M Jobling FEEDING MODES IN ARCTIC CHARR, *SALVELINUS ALPINUS* L.. THE IMPORTANCE OF BOTTOM FEEDING FOR THE MAINTENANCE OF GROWTH. *Aquaculture* 86(4):379-385 1990. FR 35(3)
[Norwegian Coll. Fish. Sci , Univ. Tromso, Dramsveien 201, N-9000 Tromso, Norway]

90-003949 Keats, D W. FOOD OF WINTER FLOUNDER *PSEUDOPLEURONECTES AMERICANUS* IN A SEA URCHIN DOMINATED COMMUNITY IN EASTERN NEWFOUNDLAND. *Mar. Ecol. Prog. Ser.* 60(1/2):13-22 1990. FR 35(3)
[Bot. Dep , Univ. Western Cape, Private Bag X17, Bellville 7535, South Africa]

90-003950 Keller, Aimee A ; Peter H Doering; Stephen P. Kelly and Barbara K Sullivan GROWTH OF JUVENILE ATLANTIC MENHADEN, *BREVOORTIA TYRANNUS* (PISCES: CLUPEIDAE) IN MERL MESOCOSMS: EFFECTS OF EUTROPHICATION *Limnol. Oceanogr.* 35(1).109-122. 1990. FR 35(3)
[Mar. Ecosyst. Res. Lab., Grad. School Oceanogr., Univ. R I , Narragansett 02882-1197]

90-003951 Konchina, Yu. V FEEDING OF SOUTH AFRICAN CAPE HAKE, *MERLUCCIUS CAPENSIS*. *J. Ichthyol. (Engl. Transl Vopr. Ikhtiol.)* 29(5):62-70. 1989. FR 35(3)
[All-Union Mar. Fish & Oceanogr. Res. Inst.-VNIRO, Moscow, USSR]

90-003952 Krasnopeyor, E. V. GUT EVACUATION RATE IN THE BREAM, *ABRAMIS BRAMA*. *J. Ichthyol. (Engl. Transl. Vopr. Ikhtiol.)* 29(6).85-95 1989 FR 35(3)
[Inst. Biol Interior Waters, AN SSSR, Borok, Yarslavskoy Prov , USSR] *Cyprinus carpio*.

90-003953 Leta, Hector. [CONTRIBUTION TO THE KNOWLEDGE OF THE FOOD AND FEEDING OF THE KING WEAKFISH (*MACRODON ANCYLODON*)] *Publ. Com. Tecnica Mixte Frinte Marit.* 3 77-78 1987 In Spanish with English summ FR 35(3)
[Inst Nac. Pesca, Constituyente 1497, Montevideo, Uruguay]

90-003954 Linden, Alison L and Joseph J. Cech, Jr. PREY SELECTION BY MOSQUITOFISH (*GAMBUSIA AFFINIS*) IN CALIFORNIA RICE FIELDS EFFECT OF VEGETATION AND PREY SPECIES *J. Am. Mosq. Control Assoc.* 6(1).115-120 1990 FR 35(3)
[Dep Wildl & Fish Biol., Univ Calif , Davis 95616]

90-003955 Lydersen, C.; I. Gjertz and J M Weslawski. STOMACH CONTENTS OF AUTUMN-FEEDING MARINE VERTEBRATES FROM HORNSUND, SVALBARD *Polar Rec.* 25(153) 107-114. 1989 From Ecol. Abstr 90(2) 90L/01119 1990. FR 35(3)
Boreogadus saida, *Liparis liparis*, and *Myoxocephalus scorpius*.

90-003956 Mamcarz, Andrzej and Eugenia Murawska STUDIES ON THE LARVAE AND FRY FEEDING OF THE TWO COREGONIDAE SPECIES DURING ITS FIRST YEAR OF GROWTH IN ILLUMINATED CAGES. *Acta Ichthyol. Piscatoria* 18(2) 51-71. 1988 In English with Polish summ FR 35(3)
[Katedra Rybactwa, Akad. Rolniczo-Tech., 10-957 Olsztyn-Kortowo, Poland] *Coregonus lavaretus* and *C. peled* in Poland.

90-003957 Margulies, Daniel VULNERABILITY OF LARVAL WHITE PERCH, *MORONE AMERICANA*, TO FISH PREDATION. *Environ. Biol. Fishes* 27(3) 187-200 1990. FR 35(3)

FOODS/FEEDING (CONTINUED)

90-003957 CONTINUED
[Inter-Am Trop Tuna Comm., c/o Scripps Inst Oceanogr., La Jolla, CA 92093] *Lepomis macrochirus*

90-003958 Margulies, Daniel. SIZE-SPECIFIC VULNERABILITY TO PREDATION AND SENSORY SYSTEM DEVELOPMENT OF WHITE SEABASS, *ATRACTOSCION NOBILIS*, LARVAE. *U.S Natl. Mar. Fish. Serv. Fish. Bull.* 87(3):537-553. 1989. FR 35(3)
[Inter-Am Tropical Tuna Comm , c/o Scripps Inst Oceanogr , La Jolla, CA 92093] *Engraulis mordax*

90-003959 Marmulla, G and R Rosch MAXIMUM DAILY RATION OF JUVENILE FISH FED ON LIVING NATURAL ZOOPLANKTON *J. Fish Biol.* 36(6).789-801 1990. FR 35(3)
[Rosch' Inst. Lake Res & Fish., Untere Seestr. 81, D-7994 Langenargen, West Germany] *Perca fluviatilis, Leuciscus leuciscus, Rutilus rutilus, Abramis brama,* and *Alburnus alburnus.*

90-003960 Moreira, F. FOOD OF THE SWORDFISH, *XIPHIAS GLADIUS* LINNAEUS, 1758, OFF THE PORTUGUESE COAST *J. Fish Biol.* 36(4):623-624 1990. FR 35(3)
[Fac. Cienc Lisboa, Dep. Zool. Anthropol , Bloco C2, Campo Grande, Lisbon, Portugal]

90-003961 Mullin, M. M and A. Conversi. BIOMASSES OF EUPHAUSIIDS AND SMALLER ZOOPLANKTON IN THE CALIFORNIA CURRENT - GEOGRAPHIC AND INTERANNUAL COMPARISONS RELATIVE TO THE PACIFIC WHITING, *MERLUCCIUS PRODUCTUS*, FISHERY. *U.S. Natl. Mar. Fish. Serv. Fish. Bull.* 87(3):633-644. 1989. FR 35(3)
[Inst Mar Resour A-018, Univ. Calif., San Diego, La Jolla 92093-0218]

90-003962 Nelson, Walter G. and Mary Ann Capone EXPERIMENTAL STUDIES OF PREDATION ON POLYCHAETES ASSOCIATED WITH SEAGRASS BEDS. *Estuaries* 13(1):51-58. 1990. FR 35(3)
[Dep. Oceanogr & Ocean Eng., Inst. Technol., Melbourne, FL 32901] *Lagodon rhomboides.*

90-003963 O'Brien, W. John, Howard I. Browman and Barbara I Evans. SEARCH STRATEGIES OF FORAGING ANIMALS *Am. Sci.* 78(2):152-160 1990 FR 35(3)
[Dep. Syst & Ecol., Univ Kans., Lawrence 66045-2106] *Thymallus arcticus* and *Pomoxis annularis*

90-003964 Orlova, E. L , L. I. Karamushko, E. G Berestovskii and E. A. Kireeva. STUDIES ON FEEDING IN THE ATLANTIC WOLFFISH, *ANARHICHAS LUPUS*, AND THE SPOTTED WOLFFISH, *A. MINOR*, UNDER EXPERIMENTAL CONDITIONS. *J. Ichthyol. (Engl. Transl. Vopr. Ikhtiol.)* 29(7) 91-101. 1989. FR 35(3)
[Murmansk Mar. Biol. Inst., Karel'sk Branch, USSR Acad. Sci., Moscow, USSR]

90-003965 Paul, A. J., J M. Paul and R L. Smith. CONSUMPTION, GROWTH AND EVACUATION IN THE PACIFIC COD, *GADUS MACROCEPHALUS*. *J. Fish Biol.* 37(1):117-124 1990. FR 35(3)
[Univ. Alaska, Inst. Mar. Sci., Seward Mar. Cent Lab., P.O Box 730, Seward 99664]

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90-003966 Paul, Valerie J , Stephen G. Nelson and Herling R. Sanger FEEDING PREFERENCES OF ADULT AND JUVENILE RABBITFISH *SIGANUS ARGENTEUS* IN RELATION TO CHEMICAL DEFENSES OF TROPICAL SEAWEEDS. *Mar. Ecol. Prog. Ser.* 60(1/2):23-34 1990 FR 35(3)
[Univ. Guam Mar Lab., Mangilao, Guam 96923]

90-003967 Pitman, Robert L and Lisa T Ballance. DAYTIME FEEDING BY LEACH'S STORM-PETREL ON A MIDWATER FISH IN THE EASTERN TROPICAL PACIFIC *Con.* , 92:524-527 1990 FR 35(3)
[Southwest Fish Cent , P O Box 271, La Jolla, CA 92038]

90-003968 Qurnton, J C and R W. Blake THE EFFECT OF FEED CYCLING AND RATION LEVEL ON THE COMPENSATORY GROWTH RESPONSE IN RAINBOW TROUT, *ONCORHYNCHUS MYKISS*. *J. Fish Biol.* 37(1) 33-41 1990. FR 35(3)
[Biol Dep., Simon Fraser Univ., Burnaby, BC, Canada V5A 1S6]

90-003969 Reimchen, T. E SIZE-STRUCTURED MORTALITY IN A THREESPINE STICKLEBACK *(GASTEROSTEUS ACULEATUS)* - CUTTHROAT TROUT *(ONCORHYNCHUS CLARKI)* COMMUNITY. *Can. J. Fish. Aquat Sci.* 47(6):1194-1205. 1990 In English with French summ. FR 35(3)
[Dep. Zool , Univ. Alberta, Edmonton, AB, Canada T6G 2E9]

90-003970 Reinthal, Peter N. THE FEEDING HABITS OF A GROUP OF HERBIVOROUS ROCK-DWELLING CICHLID FISHES (CICHLIDAE PERCIFORMES) FROM LAKE MALAWI, AFRICA. *Environ. Biol. Fishes* 27(3) 215-233. 1990 FR 35(3)
[Dep. Herpetol. & Ichthyol., Am Mus. Nat Hist , Central Park W. 79th St , New York, NY 10024] Data for 11 species

90-003971 Rondorf, Dennis W ; Gerard A Gray and Robert B. Fairley. FEEDING ECOLOGY OF SUBYEARLING CHINOOK SALMON IN RIVERINE AND RESERVOIR HABITATS OF THE COLUMBIA RIVER. *Trans. Am. Fish. Soc.* 119(1):16-24. 1990 FR 35(3)
[U S Fish & Wildl Serv , Natl Fish. Res. Cent , Columbia River Field Stn , Cook, WA 98605] *Oncorhynchus tshawytscha*.

90-003972 Watson, William and Raymond L. Davis, Jr. LARVAL FISH DIETS IN SHALLOW COASTAL WATERS OFF SAN ONOFRE, CALIFORNIA. *U.S. Natl. Mar. Fish. Serv. Fish. Bull.* 87(3) 569-591 1989 FR 35(3)
[Southwest Fish Cent La Jolla Lab., NMFS, NOAA, P O. Box 271, La Jolla, CA 92038] *Atherinopsis californiensis, Leuresthes tenuis, Paralabrax, Genyonemus lineatus, Seriphus politus,* and *Paralichthys californicus*

90-003973 Wetherbee, Brad DIET, FOOD HABITS, AND CONSUMPTION IN THE LEMON SHARK, *NEGAPRION BREVIROSTRIS*. *Pac. Sci.* 44(2):196. 1990 Abstract only. FR 35(3)
[Dep. Zool., Univ Hawaii Manoa, Honolulu 96822]

90-003974 Yanagisawa, Yasunobu and Tetsu Sato ACTIVE BROWSING BY MOUTHBROODING FEMALES OF *TROPHEUS DUBOISI* AND *TROPHEUS MOORII* (CICHLIDAE) TO FEED THE YOUNG AND/OR THEMSELVES *Environ. Biol. Fishes* 27(1):43-50. 1990. FR 35(3)
[Dep Biol , Ehime Univ., Matsuyama 790, Japan]

90-003975 Young, Jock W. and Tim L O Davis. FEEDING ECOLOGY OF LARVAE OF SOUTHERN BLUEFIN, ALBACORE AND SKIPJACK TUNAS (PISCES SCOMBRIDAE) IN THE EASTERN INDIAN OCEAN *Mar. Ecol. Prog. Ser.* 61(1/2):17-29.

FOODS/FEEDING (CONTINUED)

90-003975 CONTINUED 1990 FR 35(3)
[CSIRO Div Fish , GPO Box 1538, Hobart, Tasm 7001, Australia] *Thunnus alalunga, T. maccoyii,* and *Euthynnus pelamis*

90-003976 Zale, Alexander V and Richard W Gregory FOOD SELECTION BY EARLY LIFE STAGES OF BLUE TILAPIA, *OREOCHROMIS AUREUS,* IN LAKE GEORGE, FLORIDA OVERLAP WITH SYMPATRIC SHAD LARVAE *Fla. Sci.* 53(2) 123-129 1990 FR 35(3)
[Coop Fish & Wildl Res Unit, Okla State Univ , Stillwater 74078] *Dorosoma petenense* and *D cepedianum.*

90-003977 Zimmermann, Horst [CORMORANT, *PHALACROCORAX CARBO,* AND THE FISHERIES INDUSTRY IN WEST GERMANY] *Beitr Vogelkd* 35(1/4) 193-198 1989 In German FR 35(3)
[Edgar-Bennert-Str 26, DDR-276 Schwerin, East Germany]

AGE AND GROWTH

90-003978 Belestovskiy, E G FEEDING IN THE SKATES, *RAJA RADIATA* AND *RAJA FYLLAE,* IN THE BARENTS AND NORWEGIAN SEAS *J Ichthyol. (Engl. Transl. Vopr. Ikhtiol.)* 29(8) 88-96 1989. FR 35(3)
[Murmansk Mar Biol Inst , Kola Affiliated Soc USSR Acad Sci , Murmansk, USSR] *Gadus morhua morhua, Sebastes marinus,* and *S. mentella.*

90-003979 Butler, John L GROWTH DURING THE LARVAL AND JUVENILE STAGES OF THE NORTHERN ANCHOVY, *ENGRAULIS MORDAX,* IN THE CALIFORNIA CURRENT DURING 1980-84 *U.S. Natl. Mar. Fish Serv. Fish. Bull.* 87(3) 645-652. 1989. FR 35(3)
[Southwest Fish Cent , NMFS, NOAA, P.O Box 271, La Jolla, CA 92038]

90-003980 Caillart, Benoit and Eric Morize [STUDY OF THE FREQUENCY OF INCREMENT FORMATION ON THE OTOLITHS OF A TROPICAL SERRANIDAE, *EPINEPHELUS MICRODON* (BLEEKER), USING A FLUORESCENT MARKER: OXYTETRACYCLINE] *Aquat. Living Resour* 2(4),255-261. 1989 In French with English summ. FR 35(3)
[Cent ORSTOM Brest, BP n° 70, 29263 Plouzane, France]

90-003981 Chen, C T.; T. C Leu; S. J Joung and N. C H Lo. AGE AND GROWTH OF THE SCALLOPED HAMMERHEAD, *SPHYRNA LEWINI,* IN NORTHEASTERN TAIWAN WATERS *Pac. Sci* 44(2) 156-170 1990. FR 35(3)
[Grad. School Fish., Natl Taiwan Ocean Univ., Keelung, Taiwan]

90-003982 de Leon, Ma E and M Guardiola. [CHARACTERIZATION OF THE GENUS *SCOMBEROMORUS* FROM THE SOUTHEASTERN ZONE OF CUBA] *Rev. Cubana Invest. Pesq.* 9(3-4) 1-26 1984. In Spanish with English summ. FR 35(3)
[Cent Invest., Pesqueras, Cuba] *S. cavalla, S. regalis,* and *S. maculatus.*

90-003983 Deniel, C. COMPARATIVE STUDY OF GROWTH OF FLATFISHES ON THE WEST COAST OF BRITTANY *J. Fish Biol.* 37(1)·149-166. 1990. FR 35(3)
[Univ Bretagne Occidentale, Lab Biol. Anim -Poissons Marins, Fac Sci., 29287 Brest Cedex, France] Data for 10 species in France

AGE AND GROWTH (CONTINUED)

90-003984 Fabie, Nidia N. and Maria B. Cousseau. [FIRST OBSERVATIONS ON AGE AND GROWTH OF A FLATFISH (*XYSTREURIS RASILE*).] *Publ. Com. Tecnica Mixte Frente Mart.* 4:107-116. 1988. In Spanish with English summ. FR 35(3)
[Inst. Nac. Invest. & Desarrollo Pesquero, Playa Grande, 7600 Mar del Plata, Argentina]

90-003985 Francis, R. I. C. C. BACK-CALCULATION OF FISH LENGTH: A CRITICAL REVIEW. *J. Fish Biol.* 36(6):883-902. 1990. FR 35(3)
[Fish. Res. Cent., Box 297, Wellington, New Zealand]

90-003986 Frank, Kenneth T. and Jeff K. McRuer. NUTRITIONAL STATUS OF FIELD COLLECTED HADDOCK (*MELANOGRAMMUS AEGELFINUS*) LARVAE FROM SOUTHWESTERN NOVA SCOTIA: AN ASSESSMENT BASED ON MORPHOMETRIC AND VERTICAL DISTRIBUTION DATA. *Can. J. Fish. Aquat. Sci.* 46(Supp. 1):125-133. 1989. In English with French summ. FR 35(3)
[Dep. Fish. & Oceans, Mar. Fish. Div., Bedford Inst. Oceanogr., P.O. Box 1006, Dartmouth, NS, Canada B2Y 4A2]

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90-004104 Bernoth, E -M AUTOAGGLUTINATION, GROWTH ON TRYPTONE-SOY-COOMASSIE-AGAR, OUTER MEMBRANE PROTEIN PATTERNS AND VIRULENCE OF *AEROMONAS SALMONICIDA* STRAINS. *J. Fish Dis.* 13(2) 145-155 1990. FR 35(3)
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90-004115 Ishida, Noriko. [COMPARISON OF BILIARY METABOLITES OF OXOLINIC ACID IN SEVEN SPECIES OF TELEOSTS] *Nippon Suisan Gakkaishi* 56(1):55-59 1990 In Japanese with English summ. FR 35(3)
[Natl. Res Inst. Fish. Sci., Kachidoki, Chuo, Tokyo 104, Japan] *Tilapia mossambica, Anguilla japonica, Pagrus major, Trachurus japonicus, Seriola quinqueradiata, Paralichthys olivaceus,* and *Oncorhynchus mykiss*

90-004116 Jones, J. B *GOUSSIA AUXIDIS* (DOGIEL, 1948) (APICOMPLEXA: CALYPTOSPORIDAE) FROM TUNA (PISCES, SCOMBRIDAE) IN THE SOUTH PACIFIC *J. Fish Dis.* 13(3):215-223 1990. FR 35(3)
[Fish Res Cent., M.A F., P O Box 297, Wellington, New Zealand] *Thunnus alalunga, T. albacares, T. maccoyii, Gasterachisma melampus, Allothunnus fallai, Scomber australasicus,* and *Euthynnus pelamis*

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[Coll. Vet. Med., Miss. State Univ , Drawer V, Mississippi State 39762] *Ictalurus punctatus.*

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[Natl. Res. Inst. Aquacult , Nansei, Mie 516-01, Japan]

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[Hokkaido Salmon Hatchery, Fish. Agency Japan, 2-2 Nakanoshima, Toyohira-ku, Sapporo 062, Japan]

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[U S. Fish & Wildl. Serv., Natl Fish Res Cent , Bldg. 204, Naval Stn , Seattle, WA 98115] *Oncorhynchus mykiss, O. nerka, O. tshawytscha, Cyprinus carpio, Pimephales promelas,* and *Lepomis macrochirus*

90-004168 Bootland, L M., P Dobos and R M. W Stevenson FRY AGE AND SIZE EFFECTS ON IMMERSION IMMUNIZATION OF BROOK TROUT, *SALVELINUS FONTINALIS* MITCHELL, AGAINST INFECTIOUS PANCREATIC NECROSIS VIRUS. *J. Fish Dis.* 13(2):113-125 1990 FR 35(3)
[Stevenson: Dep Microbiol , Coll. Biol. Sci., Univ Guelph, Guelph, ON, Canada N1G 2W1]

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[Dep. Microbiol , Oreg State Univ., Corvallis 97331-3804] *Onchorhynchus tshawytscha*

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[Unite Immunocytochim., CNR URA 359, Inst. Pasteur, Stn Res Virol & Immunol Mol., Cent Res , Jouy-en-Josas, France] *Oncorhynchus mykiss.*

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[Dep. Fish & Wildl., Dep. Microbiol., Oreg State Univ., Corvallis 97331-3804] *Oncorhynchus nerka* and *O. mykiss.*

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POLLUTION

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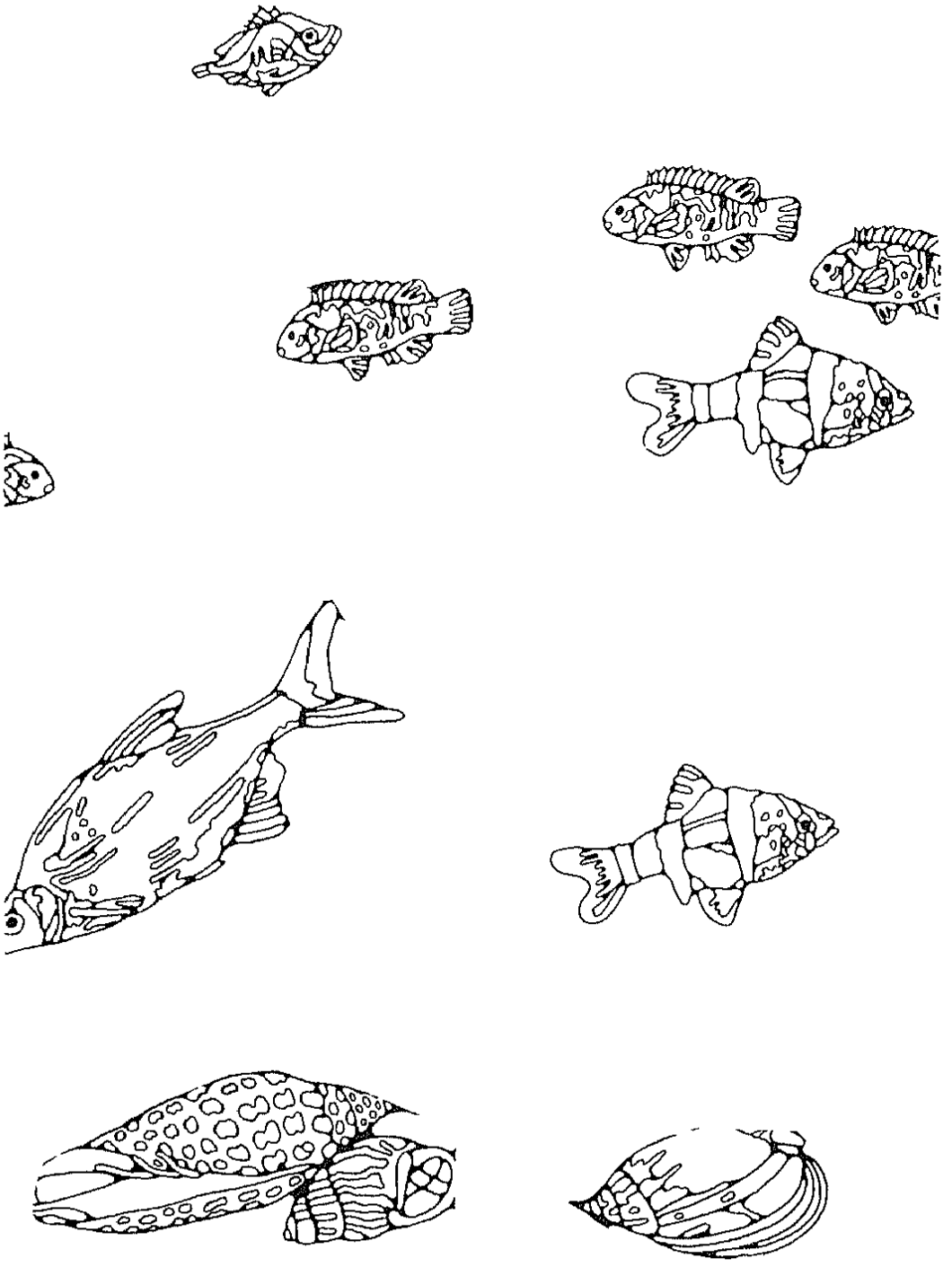

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